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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10,026,453	12/27/2001	Kevin M. Gaukel	A8179	1554

7590 04/02/2003

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

TAKAOKA, DEAN O

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 04/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,453

Applicant(s)

GAUKEL ET AL.

Examiner

Dean O Takaoka

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,13,17,20 and 21 is/are rejected.
- 7) ☒ Claim(s) 3-5,7-12,14-16,18,19,22 and 23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Figs. 1 – 5 are labeled as "**Prior Art**" which is not indicated in the specification "Brief Description of the Drawings".

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: reference number **P1** (Figs. 6, 10) does not appear to be mentioned in the specification.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The applicant is required to provide a copy of the drawings with proposed drawing changes marked in red ink as required by 37 CFR 1.121(d).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

While applicant may be his or her own lexicographer, a term in a claim may not be given a meaning repugnant to the usual meaning of that term. See *In re Hill*, 161

F.2d 367, 73 USPQ 482 (CCPA 1947). The term "stripline" in claim 6, 13 and 17 is used by the claim to mean "stripline," while the accepted meaning is "transmission line."

The term "stripline" is well-known in the art to define a length of transmission line between an upper and lower ground planes. While the transmission line of the present invention may be defined as a transmission line formed in a "strip", it could not be said that the transmission line is a "stripline" since the transmission line does not reside between an upper and lower ground plane layers. Since the term "stripline" has a well-defined meaning in the art, the terminology used in the claims is repugnant.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Jachowski (U.S. Patent No. 5,191,304).

Claim 1:

Ishikawa et al. shows a combiner comprising: a common port (24); a plurality of cavity resonators (10, 11 comprising resonators 14); a plurality of apertures (comprising holes where "fitting projections 21" are placed into); and a combining mechanism (25) connected to a common port (24) and coupled to the plurality of cavity resonators through the apertures (via coupling through fitting projections 21 and coupling loop 25).

Claim 2:

At least one junction to combine signals (24) from at least one pair of cavity resonators (10, 11), where the at least one junction is operably connected to the common port (24); and a transmission line (coupling loop 25) operably connected between each of the apertures (21) and junction (24), where a line length of the transmission line is equal to or less than a quarter wavelength (col. 3, lines 47-54).

Claim 6:

Where the combining mechanism is a stripline network.

The Examiner notes that the term "stripline" is repugnant and is given no patentable weight (discussed above in the rejection under 35 USC 112 second paragraph. It is asserted that the coupling loop 25 is a length of transmission line and thus is equivalent to the Applicant's length of transmission line).

Claim 7:

Where the cavity resonators are ceramic (dielectric resonators – 14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al. ('991) in view of Ishikawa et al. (U.S. Patent No. 6,052,041).

Claim 20:

Ishikawa et al. ('991) teaches a method (the generic method defining the final product obvious in that Ishikawa et al. shows the final product obviously made by a method) of combining a plurality of signals comprising the steps of: coupling the signals through apertures (21); and combining the signals (discussed in the reasons for rejection of claim 1 above).

Ishikawa et al. does not teach a plurality of signal pairs.

Ishikawa et al. ('041 – Figs. 7 and 8) teaches similar well-known art-recognized equivalent combiner comprising coupled pairs of resonators combined to form a plurality of signals.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the combiner disclosed by Ishikawa et al. ('991) with the coupled pairs of resonators combined to form a plurality of signals disclosed by Ishikawa et al. ('041). Such a modification would have been a mere substitution of well-known art-recognized combiners, further in that it is well-known to modify any resonator filter such as the combiner taught by Ishikawa et al. ('991) and to use a plurality of resonator pairs to create a duplexer such as the combining duplexer taught by Ishikawa et al. ('041) thus suggesting the obviousness of the modification.

Claim 21:

Combining the pairs of signals using half wavelength transmission lines (discussed in the reasons for rejection of claim 2 above).

Allowable Subject Matter

Claims 3 – 5, 8 – 12, 14 – 16, 18, 19, 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13 and 17 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Livingston – shows a diplexer with coupling element.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean O Takaoka whose telephone number is (703) 305-6242. The examiner can normally be reached on 8:30a - 5:00p Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

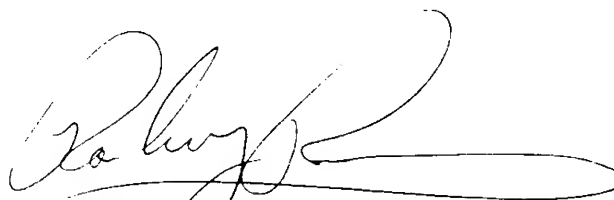
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March 26, 2003

A handwritten signature in black ink, appearing to read 'Robert Pascal', with a long horizontal flourish extending to the right.

Robert Pascal
Supervisory Patent Examiner
Technology Center 2800